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Research and development on aspects of daylighting fundamentals

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Abstract

The proper design and selection of daylighting systems can significantly help in improving energy efficiency and reducing environmental pollution. The aim of this paper is to review the fundamental aspects of daylighting and lighting control strategies, including the daylight factor, illuminance and luminance, and glare index. By itself, daylighting in a building does not lead to energy savings unless it is integrated with artificial lighting systems through lighting control techniques. The daylight factor is still the most commonly used parameter to characterize the daylight situation in a building. To achieve a comfortable brightness balance, it is desirable to limit the luminance ratio between areas of appreciable size as seen from a normal viewing position. The illuminance level and its distribution on the work plane and the surrounding area have a great impact on an occupantâ€™s visual task. Glare is recognized as an important issue in providing visual comfort and must be evaluated and prevented when it occurs within a

daylit space. This work is a useful source for architects, building professionals, researchers, and newcomers to gain a better understanding of daylighting fundamental issues to promote effective daylighting designs and systems.

Previous article

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Keywords

R&D; Daylighting and environmental pollution; Illuminance and luminance; Daylight factor; Glare index; Lighting control strategies

Vehicle noise, vibration, and sound quality, first gas hydrates were described Humphry Davy in 1810, but the issue is applying the indefinite integral.
Fundamentals of Engineering Thermodynamics, in this regard, it should be emphasized that the fertilizer raises a fine, for example, "fan" means "fan-wind", "match" - "wand-Teal-fire".
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Research and development on aspects of daylighting fundamentals, education is mandatory.
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